REMARKS

Applicant is in receipt of the Office Action mailed January 18, 2006. Claims 1 – 23 were pending. Claims 1 – 6 were subject to a restriction/election requirement and have been canceled. Claims 7 – 23 were rejected. Claims 1 – 23 have been amended. Claims 24 and 25 have been added. Accordingly, claims 7 – 25 remain pending in the application.

Restriction/Election Requirement

In a telephone interview with the Examiner conducted on January 9, 2006, Applicant elected claims 7 – 23 without traverse. Applicant hereby cancels claims 1 – 6 without prejudice or disclaimer as to the subject matter therein.

Section 101 Rejections

Claims 7 – 23 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Applicant has amended independent claim 7 to recite a specific machine or manufacture having a practical application. New claims 24 and 25 recite features directed towards a final result (e.g., "allocating an onode in memory") that is useful, tangible, and concrete. Accordingly, Applicant respectfully submits that the pending claims constitute statutory subject matter and requests withdrawal of the §101 rejections.

Section 103(a) Rejections

Claims 7 – 14, 18, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Testardi. (U.S. Patent No. 6,374,268) in view of Rao, et al. (U.S. Patent No. 5,689,706, hereinafter "Rao"). Claims 15 – 17 and 20 – 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Testardi and Rao in view of Patel, et

al. (U.S. Patent No. 6,918,113, hereinafter "Patel"). Applicant respectfully traverses the rejections in light of the following remarks.

To establish a *prima facie* case of obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Applicant respectfully submits that the cited references, taken individually or in combination, do not teach or suggest all the limitations recited in the claims.

Claims 7 – 23 have been amended. Support for the amendments may be found throughout Applicant's specification (e.g., sections [0038] and [0042]), and support for the amendment to claim 7 may additionally be found in original claim 8. Claim 7 (as amended) recites:

> A system comprising:
> at least one processor; and
> at least one memory coupled to the at least one processor, wherein the at
>   least one memory is configured to store:
>   a vnode layer configured to receive a plurality of requests for
>   filesystem operations generated by at least one application,
>   wherein the plurality of requests for the filesystem
>   operations comprise an open() request specifying a file; and
>   an overlay filesystem comprising:
>   a back filesystem containing shared read-only files; and
>   a front filesystem mounted above the back filesystem and
>   containing writable files;
>   wherein the overlay filesystem is configured to:
>   selectively route the plurality of requests for the filesystem
>   operations from the vnode layer to the front and back
>   filesystems; and
>   allocate an onode in the at least one memory upon opening the file
>   specified by the open() request, wherein the onode
>   corresponds to the file specified by the open() request and
>   comprises a shadow vnode.

Applicant respectfully submits that the cited references, taken singly or in combination, do not teach or suggest all the limitations of claim 7. In particular, the cited references do not teach or suggest a system wherein an overlay filesystem is configured

to "allocate an onode in the at least one memory upon opening the file specified by the open() request, wherein the onode corresponds to the file specified by the open() request and comprises a shadow vnode." The Office Action cited col. 2, lines 13 – 33 of Rao as teaching the allocation of onodes. At the cited location, Rao discloses the caching of file and directory data in the Sun Network File System (NFS) as well as synchronization and caching techniques in the Andrew file system. Applicant submits that neither Testardi nor Rao teaches or suggests the allocation of an onode upon opening a file. Furthermore, neither Testardi nor Rao teaches or suggests that the onode comprises a shadow vnode.

Therefore, Applicant respectfully submits that claim 7 is patentably distinct from the cited references. Dependent claims 8 – 23 provide additional limitations to independent claim 7 and are patentably distinct from the cited references for at least the same reasons. Examples of the additional limitations are addressed as follows.

Regarding claim 15, Applicant respectfully submits that the cited references, taken singly or in combination, do not teach or suggest a system "wherein each onode comprises a vnode triplet." The Office Action cited col. 38, lines 1 – 41 and col. 40, lines 1 – 56 of Patel as teaching the limitations of claim 15. At the cited locations, Patel discloses a file metadata structure which includes, among other elements of metadata, descriptors for the file itself and for its parent file. However, there is no teaching or suggestion in Patel that this file metadata structure is an onode or that the structure comprises a vnode triplet.

Regarding claim 16, Applicant respectfully submits that the cited references, taken singly or in combination, do not teach or suggest a system "wherein the vnode triplet includes a shadow vnode pointer, a front vnode pointer, and a back vnode pointer that point to a shadow vnode, a front vnode, and a back vnode, respectively." The Office Action cited col. 38, lines 1 – 41 and col. 40, lines 1 – 56 of Patel as teaching the limitations of claim 16. At the cited locations, Patel discloses a file metadata structure which includes, among other elements of metadata, descriptors for the file itself and for its parent file. However, there is no teaching or suggestion in Patel that this file metadata

structure comprises a vnode triplet including a shadow vnode pointer, a front vnode pointer, and a back vnode pointer, wherein the shadow vnode pointer points to a shadow vnode, the front vnode pointer points to a front vnode, and the back vnode pointer points to a back vnode.

Regarding claim 18, Applicant respectfully submits that the cited references, taken singly or in combination, do not teach or suggest a system "wherein the overlay filesystem includes more than two filesystems and is further configured to allocate and cache a plurality of onodes." The Office Action cited col. 2, lines 13 – 33 of Rao as teaching the limitations of claim 18. At the cited location, Rao discloses the caching of file and directory data in the Sun Network File System (NFS) as well as synchronization and caching techniques in the Andrew file system. However, Applicant can find no teaching or suggestion in Rao for the allocation and caching of a plurality of onodes. Similarly, regarding claim 14, Applicant respectfully submits that the cited references, taken singly or in combination, do not teach or suggest a system "wherein the overlay filesystem maintains a plurality of onodes."

For at least the reasons discussed above, Applicant respectfully submits that independent claims 24 and 25 are patentably distinct from the cited references. The remaining dependent claims provide additional limitations to the independent claims. Therefore, Applicant submits that claims 7 – 25 are in condition for allowance. Applicant respectfully requests withdrawal of the §101 and §103(a) rejections.

CONCLUSION

In light of the foregoing amendments and remarks, Applicants submit that all pending claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. If a phone interview would speed allowance of any pending claims, such is requested at the Examiner's convenience.

The Commissioner is authorized to charge any fees which may be required, or credit any overpayment, to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5760-23401/BNK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,

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Date: <u>April 18, 2006</u>

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